

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A method of sputtering a tungsten or tungsten-containing film from a tungsten target onto a semiconductor wafer including using krypton or xenon as a sputter gas.
2. (original) A method as claimed in claim 1 wherein the deposition takes place in a vacuum chamber with a krypton pressure of less than 10mT.
3. (original) A method as claimed in claim 2 wherein krypton pressure is less than 6mT.
4. (currently amended) A method as claimed in ~~any one of~~ claim 1 ~~to 3~~ wherein the resistivity of the tungsten film is less than 11 μ ohm cm.
5. (currently amended) A method as claimed in ~~any one of the preceding claims~~ claim 1 wherein the power supplied to the target is greater than about 1 watt per cm.

6. (currently amended) A method as claimed in ~~any one of the preceding claims~~ claim 1 wherein the wafer is placed on a platen during deposition and the platen temperature is between 200°C and 400°C.
7. (currently amended) A method as claimed in ~~any one of the preceding claims~~ claim 1 wherein the platen is negatively DC biased.
8. (original) A method as claimed in claim 1 wherein the sputtering is reactive sputtering; the sputter gases includes nitrogen and the film deposited is tungsten nitride.
9. (currently amended) A method as claimed in ~~claims 1 to 8~~ claim 1 wherein the sputter gasses further include argon.
10. (original) A method as claimed in claim 9 wherein the ratio of argon to krypton or xenon is selected to minimise stress in the deposited film.
11. (original) A method of forming a tungsten/tungsten nitride stack on a wafer including sputtering a tungsten nitride film on a wafer and sputtering a tungsten film on the tungsten/nitride film wherein the two sputtering processes are performed in a single chamber using a single target.
12. (original) A method as claimed in claim 11 wherein the wafer is on a platen and the platen temperature is maintained substantially the same for the two sputter processes.

13. (currently amended) A method as claimed in claim ~~10 or claim~~ 11 wherein the tungsten film is sputtered using a method as claimed in claim 1 ~~any one of the claims 1 to 7~~.

14. (currently amended) A method as claimed in ~~any one of claim 11 to 13~~ claim 11 wherein the tungsten or tungsten containing film is deposited using the method of ~~claims 8 to 10~~ claim 8.

15. (currently amended) A gate structure formed by the ~~methods of any one of claims 11 to 14~~ claim 11.